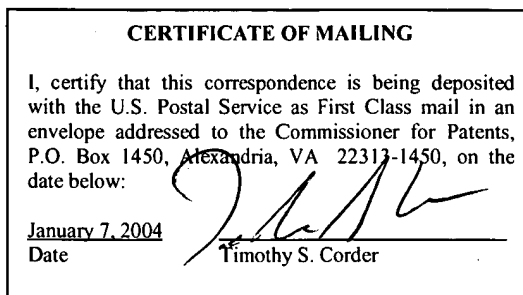




January 7, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450



Re: U.S. Patent Application Serial No. 10/606,279 entitled "KERATIN-SILICONE COPOLYMERS AND INTERPENETRATING NETWORKS (IPN's), METHODS OF PRODUCTION AND METHODS OF USE THEREOF" by Van Dyke, et al.
Atty. Docket No. KER020/4-025US

Sir:

Enclosed for filing in the above-referenced patent application are:

1. Information Disclosure Statement;
2. Form PTO-1449 along with references A1-A44, B1-B48, and C1-C131; and
3. A return postcard to acknowledge receipt of these documents. Please date stamp and mail this postcard.

Should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to the enclosed materials, the Commissioner is hereby authorized to deduct said fees from VINSON & ELKINS L.L.P. Deposit Account No. 22-0365/KER020/4-025US.

Respectfully submitted,

Timothy S. Corder
Reg. No. 38,414

9282:5588

Enclosures

391286_1.DOC



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Mark E. Van Dyke, et al.

Serial No.: 10/606,279

Filed: June 24, 2003

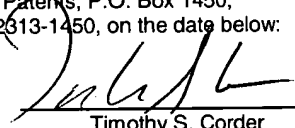
For: KERATIN-SILICONE COPOLYMERS
AND INTERPENETRATING
NETWORKS (IPN's), METHODS OF
PRODUCTION AND METHODS OF USE
THEREOF

Group Art Unit: 1772

Examiner: Unknown

Atty. Dkt. No.: KER020/4-026US

Confirmation No.: 3334

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
I hereby certify that this document is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:	
January 7, 2004 Date	 Timothy S. Corder

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

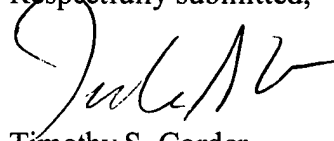
Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on the attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R. §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Vinson & Elkins L.L.P. Deposit Account No. 22-0365/KER020/4-025US.

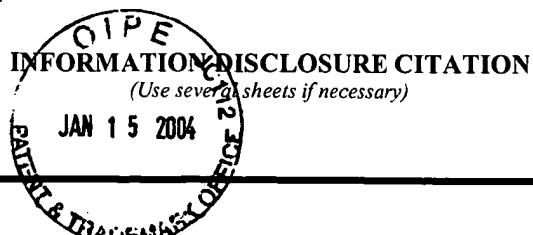
Respectfully submitted,



Timothy S. Corder
Reg. No. 38,414
Agent for Applicant

Vinson & Elkins L.L.P.
2300 First City Tower
1001 Fannin
Houston, Texas 77002-6760
512-542-8446

Date: January 7, 2004



Docket Number (Optional) KER020/4-025US		Application Number 10/606,279
Applicant(s) Mark E. Van Dyke et al.		
Filing Date June 24, 2003	Group Art Unit 1772	

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	4,135,942	01/23/79	Kikkawa	106	155	
	A2	4,357,274	11/02/82	Werner	260	123	
	A3	4,369,037	01/18/83	Matsunaga et al.	8	127	
	A4	4,439,417	03/27/84	Matsunaga et al.	424	70	
	A5	4,495,173	01/22/85	Matsunaga et al.	424	70	
	A6	4,570,629	02/18/86	Widra	128	156	
	A7	4,751,074	06/14/88	Matsunaga et al.	424	70	
	A8	4,839,168	06/13/89	Abe et al.	424	74	
	A9	4,895,722	01/23/90	Abe et al.	424	71	
	A10	4,959,213	09/25/90	Brod et al.	514	21	
	A11	5,047,249	09/10/91	Rothman et al.	424	543	

FOREIGN PATENT DOCUMENTS

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	B1	EP0454600A	10/30/91	Europe			√	
	B2	JP5285374	11/02/93	Japan			Abstract	
	B3	JP5285375	11/02/93	Japan			Abstract	
	B4	JP56129035	10/08/81	Japan			Abstract	
	B5	JP6116300	04/26/94	Japan			Abstract	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

C1	Southwest Research Institute Annual Report, 17-18, 21, 1997
C2	Technology Today, 16(3):9, 1995

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				Docket Number (Optional)		Application Number	
				KER020/4-025US		10/606,279	
				Applicant(s)			
				Mark E. Van Dyke et al.			
				Filing Date		Group Art Unit	
				June 24, 2003		1772	

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 PATENT & TRADEMARK OFFICE

PATENT DOCUMENTS							
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A12	5,134,031	07/28/92	Kagechi et al.	428	373	
	A13	5,258,043	11/02/93	Stone	623	66	
	A14	5,276,138	01/04/94	Yamada et al.	530	357	
	A15	5,358,935	10/25/94	Smith et al.	514	21	
	A16	5,712,252	01/27/98	Smith	514	21	
	A17	5,763,583	06/09/98	Arai et al.	530	353	
	A18	5,792,090	08/11/98	Ladin	602	48	
	A19	5,824,331	10/20/98	Usala	424	424	
	A20	5,932,552	08/03/99	Blanchard et al.	514	21	
	A21	5,948,432	09/07/99	Timmons et al.	424	443	
	A22	5,679,377	10/21/97	Bernstein et al.	424	491	

FOREIGN PATENT DOCUMENTS								
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	B6	JP6293631	10/21/94	Japan			√	
	B7	JP6336499	12/06/94	Japan			Abstract	
	B8	RU2106154C1	03/10/98	Russia			Abstract	
	B9	JP1197423	08/09/89	Japan			Abstract	
	B10	JP3011099	01/18/91	Japan			Abstract	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	C3	Yamauchi et al., "Cultivation of fibroblast cells on keratin-coated substrata," Polymers of Tissue Engineering, 329-40 1998
	C4	Atala et al., "Injectable alginate seeded with chondrocytes as a potential treatment for vesicoureteral reflux," The Journal of Urology, Vol. 150, 745-47, August 1993

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		Applicant(s)			
		Mark E. Van Dyke et al.			
		Filing Date		Group Art Unit	
		June 24, 2003		1772	

PATENT & TRADEMARK OFFICE
 JAN 15 2004

*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	C5	Bellamkonda et al., "Hydrogel-based three-dimensional matrix for neural cells," <i>Journal of Biomedical Materials Research</i> , Vol. 29, 663-71 (1995)
	C6	Cao et al., "Tissue-engineered nipple reconstruction," <i>Plastic and Reconstructive Surgery</i> , Vol. 102, No. 7, 2293-98, December 1998
	C7	de Chalain et al., "Bioengineering of elastic cartilage with aggregated porcine and human auricular chondrocytes and hydrogels containing alginate, collagen, and k-elastin," <i>J. Biomed. Matter Res.</i> , 280-88, 1999
	C8	Dillon et al., "The influence of physical structure and charge on neurite extension in a 3D hydrogel scaffold," <i>J. Bioimater. Sci. Polymer Edn.</i> , Vol. 9, No. 10, 1049-69 (1998)
	C9	Kang et al., "Fabrication of porous gelatin scaffolds for tissue engineering," <i>Biomaterials</i> , 20, 1339-44, 1999
	C10	Plant et al., "Axonal growth within poly (2-hydroxyethyl methacrylate) sponges infiltrated with Schwann cells and implanted into the lesioned rat optic tract," <i>Brain Research</i> , 671, 119-130, 1995
	C11	Santin et al., "Synthesis and characterization of a new interpenetrated poly (2-hydroxyethylmethacrylate)-gelatin composite polymer," <i>Biomaterials</i> , 17, 1459-67 (1996)
	C12	Sechriest et al., "GAG-augmented polysaccharide hydrogel: A novel biocompatible and biodegradable material to support chondrogenesis," <i>J. Biomed. Matter. Res.</i> , 535-41, 2000
	C13	Yu et al., "A laminin and nerve growth factor-laden three-dimensional scaffold for enhanced neurite extension," <i>Tissue Engineering</i> , Volume 5, Number 4, 1999

FOREIGN PATENT DOCUMENTS								
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
	B11	JP3294297	12/25/91	Japan			Abstract	
	B12	JP4312534	11/04/92	Japan			Abstract	
	B13	JP57109797	07/08/82	Japan			Abstract	

EXAMINER	DATE CONSIDERED

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INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				Docket Number (Optional)		Application Number	
				KER020/4-025US		10/606,279	
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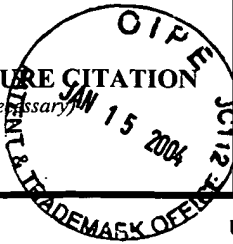
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	A23	922,692	05/25/09	Goldsmith			
	A24	926,999	07/06/09	Neuberg			
	A25	960,914	06/07/10	Heinemann			
	A26	3,642,498	02/15/72	Anker	99	166	
	A27	4,423,032	12/27/83	Abe et al.	424	70	
	A28	4,895,722	01/23/90	Abe et al.	424	71	
	A29	5,047,249	09/10/91	Rothman et al.	424	543	
	A30	1,214,299	01/30/17	Grosvenor et al.			
	A31	2,434,688	11/03/42	Evans	18	47.5	
	A32	2,445,028	07/13/48	Jones et al.	106	155	

FOREIGN PATENT DOCUMENTS								
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	B14	WO 91/02538	03/07/91	PCT				
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	B17	JP 04091138 A2	03/24/92	Japan			Abstract	

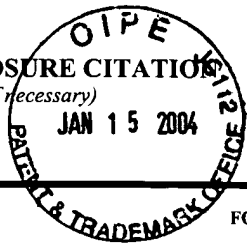
OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>	
	C14 Thomas et al., "Isolation of microfibrillar proteins of wool in disulfide form," Melliand Textiberichte, 65(3):20809, 1984
	C15 van de Löcht, "Reconstitution of microfibrils from wool and filaments from epidermis proteins," Melliand Textiberichte, 10:780-6, 1987

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>						Docket Number (Optional) KER020/4-025US		Application Number 10/606,279	
			Applicant(s) Mark E. Van Dyke, et al.						
			Filing Date June 24, 2003			Group Art Unit 1772			
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	A33	2,517,572	08/08/50	Jones et al.	106	155			
	A34	2,814,851	12/03/57	Hervey	28	82			
	A35	3,033,755	05/08/62	Jacobi et al.	167	90			
	A36	3,655,416	04/11/72	Vinson et al.	106	155			
	A37	4,178,361	12/11/79	Cohen et al.	424	22			
	A38	5,320,796	06/14/94	Harashima et al.	264	349			
	A39	5,634,945	06/03/97	Pernia et al.	623	11			
	A40	5,679,819	10/21/97	Jones et al.	556	418			
	A41	6,110,487	08/29/00	Timmons et al.	424	443			
	A42	6,270,791	08/07/01	Van Dyke et al.	424	443			
	A43	6,274,163	08/14/01	Blanchard et al.	424	443			
	A44	5,300,285	04/05/94	Halloran et al.	424	71			
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	B18	SHO 54-124043	02/06/82	Japan			X		
	B19	S55-187190	12/26/80	Japan			X		
	B20	1988-202582	08/13/88	Japan			X		
	B21	HEI 4-189833	07/08/92	Japan			X		
	B22	1992-174659	05/22/92	Japan			X		
EXAMINER				DATE CONSIDERED					
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.									

INFORMATION DISCLOSURE CITATIONS
(Use several sheets if necessary)



Docket Number (Optional)

KER020/4-025US

Application Number

10/606,279

Applicant(s)

Mark E. Van Dyke et al.

Filing Date

June 24, 2003

Group Art Unit

1772

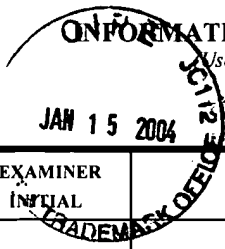
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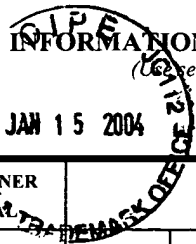
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	B25	JP1994116300A	04/26/1994	Japan			X	
	B26	JP1998291999A	11/04/98	Japan			X	
	B27	JP1993285374A	11/02/93	Japan			X	
	B28	JP1993285375A	11/02/93	Japan			X	
	B29	63-47470	09/22/88	Japan				X
	B30	62-1731	01/14/87	Japan				X
	B31	2001-114647	04/24/01	Japan				X
	B32	8-157342	06/18/96	Japan				X
	B33	60-220068	11/02/85	Japan				X
	B34	3-223207	10/02/91	Japan				X
	B35	6-240579	08/30/94	Japan				X
	B36	2-212410	08/23/90	Japan				X
	B37	2002-138022	05/14/02	Japan				X
	B38	11-240822	09/07/99	Japan				X
	B39	SHO 60-220068	11/02/85	Japan			X	
	B40	WO 03/011894 A1	02/13/03	PCT				
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	B42	531,446	01/03/41	UK			X	
	B43	04091138 A	03/24/92	Japan			Abstract	
	B44	JP 2001087754	04/0301	Japan			Abstract	
	B45	0 454 600 A1	10/30/91	Europe			Abstract	
	B46	RU 2108079	04/10/98	Russia			Abstract	
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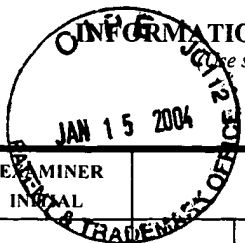
EXAMINER

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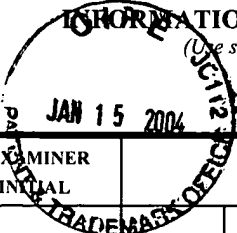
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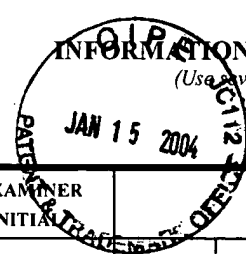
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		Applicant(s)	
		Mark E. Van Dyke et al.	
		Filing Date	Group Art Unit
		June 24, 2003	1772
*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	C16	Yoshioka et al., "Cosmetic base," unexamined Japanese Patent Application No. 3-223207, October 2, 1991	
	C17	Yoshioka et al., "Water-soluble hair dressing agent," unexamined Japanese Patent Application No. 8-157342, June 18, 1996	
	C18	Hyuku et al., "Novel amino acid silicone polymer, production thereof, cosmetic particles surface treated with the polymer, and cosmetic containing said particles," unexamined Japanese Patent Application No. 2001-114647, April 24, 2001	
	C19	Ito et al., "Biocompatibility of denatured wool keratin," 39:4, 249-256, April 1982	
	C20	Yamauchi, "The development of keratin: characteristics of polymer films," <i>Fragrance J</i> , 21(5), 62-7, 1993	
	C21	Sauk et al., "Reconstitution of cytokeratin filaments in vitro: further evidence for the role of nonhelical peptides in filament assembly," <i>The Journal of Cell Biology</i> , 99, 1590-1597, November 1984	
	C22	Weber et al., "The structural relation between intermediate filament proteins in living cells and the α -keratins of sheep wool," <i>The EMBO Journal</i> , 1:10, 1155-1160, 1982	
	C23	Hanukoglu et al., "The cDNA sequence of a human epidermal keratin: divergence of sequence but conservation of structure among intermediate filament proteins," <i>Cell</i> , 31, 243-252, November 1982	
	C24	Fraser et al., "Intermediate filaments in α -keratins," <i>Proc. Natl. Acad. Sci. USA</i> , 83, 1179-1183, March 1986	
	C25	Jones, "Studies on microfibrils from α -keratin," <i>Biochimica et Biophysica Acta</i> , 446, 515-524, Received April 5th, 1976	
	C26	Zackroff, et al., "In vitro assembly of intermediate filaments from baby hamster kidney (BHK-21) cells," <i>Proc. Natl. Acad. Sci. USA</i> , 76:12, 6226-6230, December 1979	
	C27	Mack, et al., "Solid-state NMR studies of the dynamics and structure of mouse keratin intermediate filaments," <i>Biochemistry</i> , 27, 5418-5426, 1988	
EXAMINER		DATE CONSIDERED	
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>			

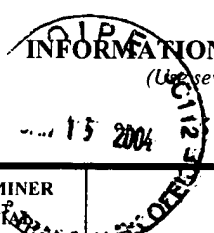
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*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	C28	Skerrow, et al., "Epidermal α -keratin is neutral-buffer-soluble and forms intermediate filaments under physiological conditions in vitro," <i>Biochimica et Biophysica Acta</i> , 915, 125-131, 1987		
	C29	Kvedar, et al., "Cytokeratins of the bovine hoof: classification and studies on expression," <i>Biochimica et Biophysica Acta</i> , 884, 462-473, 1986		
	C30	Moll, et al., "The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells," <i>Cell</i> , 31, 11-24, November 1982		
	C31	Iwatsuki, et al., "Comparative studies on naturally occurring antikeratin antibodies in human sera," <i>The Journal of Investigative Dermatology</i> , 87:2, 179-184, August 1986		
	C32	Lambré, et al., "An enzyme immunoassay for auto-antibodies to keratin in normal human serum and in pleural fluids from patients with various malignant or non-malignant lung diseases," <i>J. Clin. Lab. Immunol.</i> , 20, 171-176, 1986		
	C33	Stokes, et al., "Passage of water and electrolytes through natural and artificial keratin membranes," <i>Desalination</i> , 42, 321-328, 1982		
	C34	Dedeurwaerder, et al., "Selective extraction of a protein fraction from wool keratin," <i>Nature</i> , 265, 48-49 and 274-276, January 20, 1977		
	C35	Brunner, et al., "Fractionation of tyrosine-rich proteins from oxidized wool by ion-exchange chromatography and preparative electrophoresis," <i>Eur. J. Biochem.</i> , 32, 350-355, 1973		
	C36	Mies, et al., "Chromatographic and electrophoretic investigations of the properties of unprotected low-sulphur wool kerateins," <i>Journal of Chromatography</i> , 405, 365-370, 1987		
	C37	Katsuumi, et al., "Two-dimensional electrophoretic analysis of human hair keratins, especially hair matrix proteins," <i>Arch. Dermatol Res.</i> , 281, 495-501, 1989		
	C38	Horn, et al., "Relative molecular masses of reduced wool keratin polypeptides," <i>Biochem Soc Trans</i> , 14, 333-334, 1986		
	C39	Harrap, et al., "Species differences in the proteins of feathers," <i>Comp. Biochem. Physiol.</i> , 20, 449-460, 1967		
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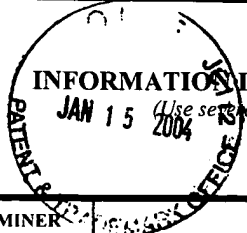
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	C40	Harrap, et al., "Soluble derivatives of feather keratin," <i>Biochem. J.</i> , 92, 8-18, 1964	
	C41	Yoshimizu, et al., " ¹³ C CP/MAS NMR study of the conformation of stretched or heated low-sulfur keratin protein films," <i>Macromolecules</i> , 24, 862-866, 1991	
	C42	Schaller, et al., "Membranes prepared from keratin-polyacrylonitrile graft copolymers," <i>Journal of Applied Polymer Science</i> , 25, 783-794, 1980	
	C43	Weiss, et al., "The use of monoclonal antibody to keratin in human epidermal disease: alterations in immunohistochemical staining pattern," <i>The Journal of Investigative Dermatology</i> , 81, 224-230, 1983	
	C44	Starger, et al., "Biochemical and immunological analysis of rapidly purified 10-nm filaments from baby hamster kidney (BHK-21) cells," <i>J. Cell Biology</i> , 78, 93-109, 1978	
	C45	Noishiki, et al., "Application of denatured wool keratin derivatives to an antithrombogenic biomaterial—vascular graft coated with a heparinized keratin derivative—," <i>Inst. Thermal Spring Res. Okayama Univ.</i> , 39:4, 221-227, 1982	
	C46	Valherie, "Chemical modifications of keratins. Application to the preparation of biomaterials and study of their physical, physicochemical and biological properties," Ph.D. Thesis presented to the National Institute of Applied Sciences of Lyon, 1992	
	C47	Dale, "Keratin and other coatings for pills," <i>Pharm. J.</i> , 129, 494-495, 1932, Abstract	
	C48	Schrooyen, et al., "Biodegradable films from selectively modified feather keratin dispersions," <i>Polymer Preprints (American Chemical Society, Division of Polymer Chemistry)</i> , 39(2), 160, 1998, Abstract	
	C49	Schrooyen, et al., "Polymer films from chicken feather keratin," Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27, 1998, Abstract	
	C50	Kikkawa, et al., "Solubilization of keratin. 6. Solubilization of feather keratin by oxidation with performic acid," <i>Hikaku Kagaku</i> , 20(3), 151-162, 1974, Abstract	
	C51	Matsunaga, et al., "Studies on the chemical property of human hair keratin. Part 1. Fractionation and amino acid composition of human hair keratin solubilized by performic acid oxidation," <i>Hikaku Kagaku</i> , 27(1), 21-29, 1981, Abstract	
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	C52	Noishiki, et al., "Application of denatured wool keratin derivatives to an antithrombogenic biomaterial. Vascular graft coated with a heparinized keratin derivative," <i>Kobunshi Ronbunshu</i> , 39(4), 221-227, 1982, Abstract	
	C53	Ito, et al., "Biocompatibility of denatured keratins from wool," <i>Kobunshi Ronbunshu</i> , 39(4), 249-256, 1982, Abstract	
	C54	Gillespie, et al., "Amino acid composition of a sulphur-rich protein from wool," <i>Biochimica et Biophysica Acta</i> , 39, 538-539, 1960	
	C55	Gough, et al., "Amino acid sequences of α -helical segments from S-carboxymethylkerateine-A. Complete sequence of a type-I segment," <i>Biochem. J.</i> , 173, 373-385, 1978	
	C56	Elleman, et al., "Amino acid sequences of α -helical segments from S-carboxymethylkerateine-A. Statistical analysis," <i>Biochem. J.</i> , 173, 387-391, 1978	
	C57	Hogg, et al., "Amino acid sequences of α -helical segments from S-carboxymethylkerateine-A. Tryptic and chymotryptic peptides from a type-II segment," <i>Biochem. J.</i> , 173, 353-363, 1978	
	C58	Earland, et al., "Studies on the structure of keratin. II. The amino acid content of fractions isolated from oxidized wool," <i>Biochimica et Biophysica Acta</i> , 22, 405-411, 1956	
	C59	Crewther, et al., "Amino acid sequences of α -helical segments from S-carboxymethylkerateine-A. Complete sequence of a type-II segment," <i>Biochem. J.</i> , 173, 365-371, 1978	
	C60	Fraser, et al., "Microscopic observations of the alkaline-thioglycollate extraction of wool," <i>Biochimica et Biophysica Acta</i> , 22, 484-485, 1953	
	C61	Gillespie, et al., "Preparation of an electrophoretically homogeneous keratin derivative from wool," <i>Biochimica et Biophysica Acta</i> , 12, 481-483, 1953	
	C62	Blagrove, et al., "The electrophoresis of the high-tyrosine proteins of keratins on cellulose acetate strips," <i>Comp. Biochem. Physiol.</i> , 50B, 571-572, 1975	
	C63	Frenkel, et al., "The isolation and properties of a tyrosine-rich protein from wool: component 0.62," <i>Eur. J. Biochem.</i> , 34, 112-119, 1973	
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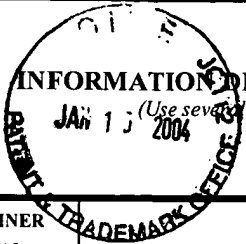
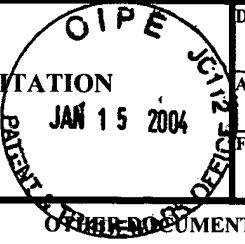
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	C64	Marshall, et al., "Successful isoelectric focusing of wool low-sulphur proteins," <i>Journal of Chromatography</i> , 172, 351-356, 1979	
	C65	Marshall, "Characterization of the proteins of human hair and nail by electrophoresis," <i>The Journal of Investigative Dermatology</i> , 80:6, 519-524, 1983	
	C66	Lindley, et al., "Occurrence of the cys-cys sequence in keratins," <i>J. Mol. Biol.</i> , 30, 63-67, 1967	
	C67	Marshall, "Genetic variation in the proteins of human nail," <i>The Journal of Investigative Dermatology</i> , 75:3, 264-269, 1980	
	C68	Goddard, et al., "A study on keratin," <i>J. Bio. Chem.</i> , 106, 605-614, 1934	
	C69	Dowling, et al., "Isolation of components from the low-sulphur proteins of wool by fractional precipitation," <i>Preparative Biochemistry</i> , 4(3), 203-226, 1974	
	C70	Crewther, et al., "Reduction of S-carboxymethylcysteine and methionine with sodium in liquid ammonia," <i>Biochimica et Biophysica Acta</i> , 194, 606-609, 1969	
	C71	Gillespie, "The isolation from wool of a readily extractable protein of low sulphur content," <i>Biochimica et Biophysica Acta</i> , 27, 225-226, 1958	
	C72	Lindley, et al., "The reactivity of the disulphide bonds of wool," <i>Biochem. J.</i> , 139, 515-523, 1974	
	C73	Mitsui, et al., "Genes for a range of growth factors and cyclin-dependent kinase inhibitors are expressed by isolated human hair follicles," <i>British Journal of Dermatology</i> , 137(5), 693-698, 1997, Abstract	
	C74	Schörnig, et al., "Synthesis of nerve growth factor mRNA in cultures of developing mouse whisker pad, a peripheral target tissue of sensory trigeminal neurons," <i>The Journal of Cell Biology</i> , 120:6, 1471-1479, 1993	
	C75	Filshie, et al., "The fine structure of α -keratin," <i>J. Mol. Biol.</i> , 3, 784-786, 1961	
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		C76	Filshie, et al., "An electron microscope study of the fine structure of feather keratin," <i>The Journal of Cell Biology</i> , 13, 1-12, 1962		
		C77	Crewther, et al., "Low-sulfur proteins from α -keratins. Interrelationships between their amino acid compositions, α -helix contents, and the supercontraction of the parent keratin," <i>Biopolymers</i> , 4, 905-916, 1966		
		C78	Bhatnagar, et al., "The conformation of the high-sulphur proteins of wool. I. The preparation and properties of a water-soluble metakeratin," <i>Int. J. Protein Research I</i> , 199-212, 1969		
		C79	Crewther, et al., "The preparation and properties of a helix-rich fraction obtained by partial proteolysis of low sulfur S-carboxymethylkerateine from wool," <i>The Journal of Biological Chemistry</i> , 242:19, 4310-4319, 1967		
		C80	Parry, et al., "Structure of α -keratin: structural implication of the amino acid sequences of the type I and type II chain segments," <i>J. Mol. Biol.</i> , 113, 449-454, 1977		
		C81	Suzuki, et al, "X-ray diffraction and infrared studies of an α -helical fragment from α -keratin," <i>J. Mol. Biol.</i> , 73, 275-278, 1973		
		C82	Bhatnagar, et al., "The conformation of the high-sulphur proteins of wool. II. Difference spectra of kerateine-B," <i>Int. J. Protein Research I</i> , 213-219, 1969		
		C83	Steinert, et al., "In vitro studies on the synthesis of guinea pig hair keratin proteins," <i>Biochimica et Biophysica Acta</i> , 312, 403-412, 1973		
		C84	Rogers, "Some observations on the proteins of the inner root sheath cells of hair follicles," <i>Biochimica et Biophysica Acta</i> , 29, 33-42, 1958		
		C85	Tachibana, et al., "Fabrication of wool keratin sponge scaffolds for long-term cell cultivation," <i>Journal of Biotechnology</i> , 93, 165-170, 2002		
		C86	Gillespie, "Proteins rich in glycine and tyrosine from keratins," <i>Comp. Biochem. Physiol.</i> , 41B, 723-734, 1972		
		C87	Fraser, et al., "Tyrosine-rich proteins in keratins," <i>Comp. Biochem. Physiol.</i> , 44B, 943-947, 1973		
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	C88	Bendit, et al., "Communications to the Editor. The probable role and location of high-glycine-tyrosine proteins in the structure of keratins," <i>Biopolymers</i> , 17, 2743-2745, 1978	
	C89	Lindley, et al., "The preparation and properties of a group of proteins from the high-sulphur fraction of wool," <i>Biochem. J.</i> , 128, 859-867, 1972	
	C90	Gillespie, et al., "Evidence of homology in a high-sulphur protein fraction (SCMK-B2) of wool and hair α -keratins," <i>Biochem. J.</i> , 110, 193-198, 1968	
	C91	Gillespie, et al., "A comparative study of high-sulphur proteins from α -keratins," <i>Comp. Biochem. Physiol.</i> , 15, 175-185, 1965	
	C92	Wormell, "Regenerated protein fibres from wool and casein," <i>The Journal of the Textile Institute</i> , 18, T219-T224, 1948	
	C93	Harding, et al., "Formation of the ϵ (γ -glutamyl) lysine cross-link in hair proteins. Investigation of transamidases in hair follicles," <i>Biochemistry</i> , 11:15, 2858-2863, 1972	
	C94	Powell, et al., "Control of feather keratin synthesis by the availability of keratin mRNA," <i>Biochemical and Biophysical Research Communications</i> , 68:4, 1263-1271, 1976	
	C95	Strüssmann, et al., "Specific radiolabelling of keratin proteins by amidination," <i>Journal of Chromatography</i> , 268, 306-310, 1983	
	C96	Lindley, et al., "Disulphide interchange reactions involving cyclocystine and their relevance to problems of α -keratin structure," <i>Biochem. J.</i> , 108, 701-703, 1968	
	C97	Damoglou, et al., "The hydrolysis by thermolysin of dipeptide derivatives that contain substituted cysteine," <i>Biochem. J.</i> , 123, 379-384, 1971	
	C98	Lennox, et al., "Photochemical degradation of keratins," <i>Photochemistry and Photobiology</i> , 9, 359-367, 1969	
	C99	Crewther, et al., "Preliminary Notes. The relation between the disulphide content of wool and the two-stage supercontraction of wool fibres in solutions of LiBr," <i>Biochimica et Biophysica Acta</i> , 46, 605-606, 1961	
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	C100	Gillespie, et al., "A comparison of the proteins of normal and trichothiodystrophic human hair," <i>The Journal of Investigative Dermatology</i> , 80, 195-202, 1983			
	C101	Gillespie, et al., "Changes in the proteins of wool following treatment of sheep with epidermal growth factor," <i>The Journal of Investigative Dermatology</i> , 79:3, 197-200, 1982			
	C102	Gillespie, et al., "Changes in the matrix proteins of wool and mouse hair following the administration of depilatory compounds," <i>Aust. J. Biol. Sci.</i> , 33, 125-136, 1980			
	C103	Darskus, et al., "Breed and species differences in the hair proteins of four genera of caprini," <i>Aust. J. Biol. Sci.</i> , 24, 515-524, 1971			
	C104	Kemp, et al., "Differentiation of avian keratinocytes. Characterization and relationships of the keratin proteins of adult and embryonic feathers and scales," <i>Biochemistry</i> , 11:6, 969-975, 1972			
	C105	Gillespie, et al., "The diversity of keratins," <i>Comp. Biochem. Physiol.</i> , 47B, 339-346, 1974			
	C106	Fraser, et al., "Wool structure and biosynthesis," <i>Nature</i> , 261, 650-654, 1976			
	C107	Stenn, et al., editors, "The molecular and structural biology of hair," <i>Annals of the New York Academy of Sciences</i> , Volume 642, Title Page – 31, 1991			
	C108	Reis, et al., "The utilization of abomasal supplements of proteins and amino acids by sheep with special reference to wool growth," <i>Aust. J. Biol. Sci.</i> , 25, 1057-1071, 1972			
	C109	Broad, et al., "The influence of sulphur-containing amino acids on the biosynthesis of high-sulphur wool proteins," <i>Aust. J. Biol. Sci.</i> , 23, 149-164, 1970			
	C110	Reis, "The influence of dietary protein and methionine on the sulphur content and growth rate of wool in milk-fed lambs," <i>Aust. J. Biol. Sci.</i> , 23, 193-200, 1970			
	C111	Downes, et al., "Metabolic fate of parenterally administered sulphur-containing amino acids in sheep and effects on growth and composition of wool," <i>Aust. J. Biol. Sci.</i> , 23, 1077-1088, 1970			
EXAMINER			DATE CONSIDERED		
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	C112	Reis, "The growth and composition of wool. IV. The differential response of growth and of sulphur content of wool to the level of sulphur-containing amino acids given per abomasum," <i>Aust. J. Biol. Sci.</i> , 20, 809-825, 1967	
	C113	Reis, et al., "Effects of phenylalanine and analogues of methionine and phenylalanine on the composition of wool and mouse hair," <i>Aust. J. Biol. Sci.</i> , 38:2, 151-163	
	C114	Frenkel, et al., "Studies on the inhibition of synthesis of the tyrosine-rich proteins of wool," <i>Aust. J. Biol. Sci.</i> , 28, 331-338, 1975	
	C115	Frenkel, et al., "Factors influencing the biosynthesis of the tyrosine-rich proteins of wool," <i>Aust. J. Biol. Sci.</i> , 27, 31-38, 1974	
	C116	Reis, "The growth and composition of wool. III. Variations in the sulphur content of wool," <i>Aust. J. Biol. Sci.</i> , 18, 671-687, 1965	
	C117	Reis, et al., "The influence of abomasal and intravenous supplements of sulphur-containing amino acids on wool growth rate," <i>Aust. J. Biol. Sci.</i> , 26, 249-258, 1973	
	C118	Gillespie, et al., "A further study on the dietary-regulated biosynthesis of high-sulphur wool proteins," <i>Biochem. J.</i> , 112, 41-49, 1969	
	C119	Gillespie, et al., "The dietary-regulated biosynthesis of high-sulphur wool proteins," <i>Biochem. J.</i> , 98, 669-677, 1966	
	C120	Powell, et al., "Characterization of a gene encoding a cysteine-rich keratin associated protein synthesized late in rabbit hair follicle differentiation," <i>Differentiation</i> , 58, 227-232, 1995	
	C121	Powell, et al., "Cyclic hair-loss and regrowth in transgenic mice overexpressing an intermediate filament gene," <i>The EMBO Journal</i> , 9:5, 1485-1493, 1990	
	C122	Raphael, et al., "Protein and amino acid composition of hair from mice carrying the naked (<i>N</i>) gene," <i>Genet. Res. Camb.</i> , 44:1, 29-38, 1984	
	C123	Frenkel, et al., "The keratin BIIIB gene family: isolation of cDNA clones and structure of a gene and a related pseudogene," <i>Genomics</i> , 4, 182-191, 1989	
EXAMINER		DATE CONSIDERED	
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	C124	Dowling, et al., "The primary structure of component 8c-1, a subunit protein of intermediate filaments in wool keratin," <i>Biochem. J.</i> , 236, 695-703, 1986	
	C125	Dowling, et al., "Secondary structure of component 8c-1 of α -keratin," <i>Biochem. J.</i> , 236, 705-712, 1986	
	C126	Kuczek, et al., "Sheep wool (glycine + tyrosine)-rich keratin genes," <i>Eur. J. Biochem.</i> , 166, 79-85, 1987	
	C127	Inagaki, et al., "Functionality of lamb wool keratin derivatives and a few characteristics of polymer materials for medical applications," <i>Chemical Research Institute, Kyoto University</i>	
	C128	Sakabe, et al., "Differential thermal analysis of component proteins from wool," <i>Sen-I Gakkaishi</i> 39(12): T-517-T-522 (1982)	
	C129	"Biomaterial forefront. Keratin which can be extracted by a simple chemical technique," <i>Kogyo Zairyo (Engineering Materials)</i> , 41:15, 106-109, 1993	
	C130	Kulkarni, "Further studies on the microfibrils from wool keratin. Part I: the isolation of microfibrils," <i>Text. Res. J.</i> , 46:11, 833-5, 1976, Abstract	
	C131	Edwards, "Chemical studies on powdered keratins," <i>The Journal of Biological Chemistry</i> , " 154, 593-596, 1944	
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